



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

silver deposit is slowly dissolved out, leaving the cellular elements more or less clearly marked. From a study of such sections, Greppin arrives at several conclusions of interest. So far as the results of Rossbach and Sehrwald go, he agrees with them in viewing the place where the silver deposit is made as the lymphatic system of the brain. By his method he further finds some coloration of the nervous elements themselves. In matching the pictures of the lymph spaces about the nerve-cell with the cell element itself, he has not observed lateral branches from the axis cylinder process filling the lateral lymph spaces which have been taken to indicate the existence of such branches. He therefore looks on the axis cylinder prolongation as unbranched. Connections either between nerve cells by any of their prolongations or between the nerve cells and fibers he has not seen, though he believes the latter to exist. In the most densely stained specimens there is always a portion not stained, which he identifies with the ground substance of the older histologists. The periglial spaces form a connected system, and he assumes that the contained glia cells thus constitute a network of varying density in the meshes of which the nervous elements are to be found. The general aim of the paper is to show that by the application of Golgi's method no new facts of fundamental importance have been added, but that the older views have been confirmed.

(Greppin does not appear to have examined any nerve cells the axis cylinder prolongations of which belonged to Golgi's second class, and in which the relation of the axis cylinder to its assumed branches is more important, for in these cells the axis cylinder must either pass into the branching lymph channels or else terminate abruptly soon after leaving the cell.—REV.)

*Transactions of the Association of American Physicians.* Third session, held at Washington, September 18-20, 1888.

At this meeting of the association one topic chosen for discussion was "The relation between trophic lesions and diseases of the nervous system." From the clinical side the presentation was made by Dr. E. C. Seguin. For his purpose Seguin recast the question in the form: "What are the lesions which may be supposed to be directly produced by disease of the nervous system (brain, spinal cord, and nerves); and what is the essential causal relation between the two factors?" Trophic lesion is understood to mean here a positive histological alteration in the tissue. Seguin distinguishes for convenience two classes. First, those occurring in parts whose sensibility is more or less reduced by nervous disease and which are exposed to the action of traumatic and infectious influences. Second, those occurring in deeper parts apparently not exposed to such influences. In cases of the first class—like ulcerations of the cornea after injury to the trigeminus, the changes in hair and nails and even extensive necrosis and gangrene following section and other injuries of the nerve trunks—it has been found that by careful exclusion of trauma and infection the disturbances can be prevented. Perforating ulcer, arthropathies, etc., which occur in the course of posterior spinal sclerosis, are extremely rare in patients able to avoid over-exertion; while cystitis, which was long considered one symptom of myelitis and injury to the spinal cord, is preventable by the use of aseptic catheters. In the second class, Seguin names neuro-muscular atrophy, and the so-called herpatic lesions of the skin, both he considers as true trophic lesions. The mechanism of these trophic changes is too obscure for discussion. As an attempt to simplify the problem under debate, Seguin calls attention to the following points in his presentation. First: That he has "rejected from the category of trophic lesions all vaso-motor, calorific and metabolic phenomena, as well as mere quantitative reductions in tissues and organs; reserving the name for such alterations as

are characterized by demonstrable histological changes." In the second place, Seguin shows that the histological lesions, apparently due to nervous disease, may be divided into two classes: "The first as above described being mere complications having a complex etiology, while those of the second class are really trophic lesions due to disease of the nervous system." Third: Without pretending to throw any new light on the intimate nature of real trophic lesions, Seguin points out that the disturbance occurs in continuous tissues, and finally ventures to suggest "that disease of the nervous system produces true trophic lesions when it interferes with the associated or inter-dependent life of continuous tissues."

From the physiological side a presentation was made by Dr. H. C. Wood. He opened with the proposition: "It is physiologically proven that the nervous system directly affects general nutrition." In support of this Wood appealed to the well-known facts of gland physiology. Next he discussed the evidence from the work of Gaskell and others, to show that there are anabolic and katabolic nerves controlling the heart. Finally, he brought forward the results of his own study on fever to show that the heat production, *i. e.*, tissue change, is controlled by a centre somewhere above the medulla. In speaking of the relations of the nerves to muscles, the motornerves are classed as katabolic, and the belief expressed that anabolic nerves, also, will in the future be found. Having presented evidence to show that the nervous system has the power of influencing nutrition, he passed to his second proposition "that various lesions are the immediate result of previous nerve disease, or nerve injury." Here Wood grouped all the cases considered by Seguin in his paper, but without any sub-division, and considered the evidence to prove the proposition just stated. His third point is that a distant lesion may follow a nerve injury or nerve disease without any precedent disturbance of the local circulation. This statement is supported entirely by evidence that decubitus may occur on the side where sensation only is paralyzed. The fourth proposition is the converse of the third. That "alterations in the condition of the vaso-motor centre are not capable of causing many of the distant lesions which follow injury or disease of the nervous system." This being mainly supported by observations on the ear of the rabbit.

In the discussion which followed, Dr. W. M. Ord of London described several cases of disease of the joints, which in his opinion were trophic.

Dr. H. P. Bowditch called attention to the nitrogenous and non-nitrogenous metabolism in muscle, and suggested that limitation of the term trophic to the former would simplify matters. Dr. David Ferrier touched on the question of a double nerve supply to muscle, and thought the study of the heat and other centres, might throw light on the question. Mr. Victor Horsley communicated the results of some work by Dr. Mott of London. Some nerves of the cauda in monkeys were tied and the femur on that side was found the seat of excessive (katabolic) changes. This is particularly interesting since loss of function and vaso-motor disturbances, both of which are often complicating factors, are in this case quite insignificant.

(There are two points in this matter which may be emphasized, namely, that the weight of opinion and anatomical results are against the view that trophic nerves form a separate class, and that the trophic action may be exerted along the nerve in a direction the reverse of that in which the impulses usually travel; witness all the forms of herpes associated with the posterior spinal roots.—REV.)

## II.—HEREDITY AND SEX.

JULIUS NELSON, PH. D.

In this section I shall review certain representative modern discussions that bear upon the theory of heredity. We shall see that the